

# **Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET)**

## **RESEARCH REVIEW TEAM DATA REQUEST JOINT INSTITUTE QUESTIONS**

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### **1. Please provide the Mission, and a brief history of your Joint Institute (JI) .**

The Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) was established in 1997 as a national center for the development of innovative environmental technologies for monitoring, managing and preventing contamination and degradation in estuaries and coastal waters. The Institute is a partnership between the University of New Hampshire (UNH) and the National Oceanic and Atmospheric Administration (NOAA), promoting collaboration among academia, government and the private sector. Located on the UNH campus and jointly managed by UNH and NOAA Co-Directors, CICEET uses the capabilities of the University and those of the Great Bay National Estuarine Research Reserve, as well as the other 24 reserves in the National Estuarine Research Reserve System (NERRS) to develop and apply new environmental technologies and techniques.

The mission of CICEET is to provide the scientific basis for understanding and reversing the impacts of coastal and estuarine contamination and degradation through the development and application of innovative environmental technologies and methods. CICEET is:

- Committed to collaboration and interdisciplinary work
- Problem driven and solution oriented
- Focused on estuarine and coastal areas
- Timely and effective in service provision to users
- Dedicated to building the capacities of scientists and coastal managers

CICEET achieves its mission through three strategic goals:

1. Develop innovative technology and methods to solve anthropogenic contamination problems and to address the restoration needs of the estuarine and coastal environment.
2. Effectively apply innovative technologies and methods to coastal resource management through synthesis, integration, training and tool development.
3. Enhance the capacity of the NERRS to understand and manage estuarine ecosystems.

**2. What is the total amount of NOAA funding in the last full year of the Joint Institute's (JI's) academic period?**

- \$6.1 M

**a) Please break out funding provided by Lab/Center.**

- Not Applicable

**b) Please provide the Research themes supported by the funding.**

- 1) Toxic Contaminants
  - Develop and/or apply novel and cost-effective methods for reducing or eliminating toxic contaminants from wastewater and storm water
  - Develop and/or apply novel and cost-effective technologies to remediate contaminated sediments and water
  - Develop new sensors to detect and quantify toxic contaminants in the environment
- 2) Microbial Contaminants
  - Develop and/or apply novel and cost-effective technologies to eliminate or reduce microbial contaminants from point and non-point sources (e.g., wastewater, urban storm water, agricultural runoff, boats, etc.)
  - Develop and/or apply novel and cost-effective technologies and methods to identify sources (including human vs. non-human) of microbial contaminants
  - Develop new sensors to detect and quantify microbial contaminants in the environment
- 3) Nutrient Enrichment and Eutrophication
  - Develop and/or apply novel and cost-effective methods for reducing or eliminating nutrients from wastewater and storm water
  - Develop better waste management technologies and strategies to reduce nutrient impacts from agriculture on coastal and estuarine ecosystems
  - Develop methods to evaluate the effectiveness of best management practices for reducing nutrient loading from agricultural, residential and commercial sources
  - Develop and/or apply novel techniques to mitigate impacts of nutrient enrichment on estuarine and coastal habitats
- 4) Habitat Degradation/Loss and Habitat Restoration
  - Develop innovative and cost effective technologies to restore coastal and estuarine habitat
  - Develop novel applications of data acquisition and processing technologies (e.g., satellite and airborne imagery, in-situ sensors, acoustic techniques, GIS, etc) to detect habitat change
  - Develop novel applications of technologies (e.g., satellite and airborne imagery, in-situ sensors, GIS, etc.) to predict the effects of land use practices on contaminant input to estuarine and coastal ecosystems

- 5) Synthesis, Integration and Transfer of Environmental Data and Information Pertinent to Priority Areas 1, 2, 3 and 4 above

- Develop innovative methods to disseminate and improve access to environmental data and information
- Develop user-friendly interfaces and easily understandable output products for predictive models
- Develop innovative strategies for providing effective management tools to coastal managers and local decision makers

**c) What percent of your research, is short term (0-2 years), medium term (2-5 years), or long term (greater than 5 years)**

- Currently 98% of CICEET research projects are short and medium term research;
- 2% of CICEET research projects are long term

**d) What is the geographic scope of your research - regional, national or global? (Please explain)**

- CICEET's research is national in scope. One of the research project requirements is that the projects take place within the watershed of one or more of the 25 NERR. The Institute's research funding priorities are also established by the needs of the state coastal management programs and the NERRS.

**3. What percent of the total Joint Institute funding comes from NOAA?**

- 100%

**4. What is the unique expertise that the JI brings to NOAA. ( e.g. special scientific skills)**

- CICEET provides NOAA with an academic and private sector interface to the environmental technology research and development community.

**5. Please provide a breakdown of staff funded by NOAA (such as scientist, engineers, computer specialists, and administrative.) Please include only staff who receive 50% or more of their funding from NOAA.)**

- UNH Co-Director (50%)
- Program Coordinator (100%)
- Research Program Manager (100%)
- Communications Coordinator (75%)

**In your response please identify a contact person and a telephone number, in case clarifying information is needed.**

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